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| 10/677,305 | 10/03/2003 | Sang Chul Yoon | P24382 | 9467 |

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| EXAMINER | |
|---|---|
| RAHIM, AZIM | |
| **ART UNIT** | **PAPER NUMBER** |
| 3744 | |
| **NOTIFICATION DATE** | **DELIVERY MODE** |
| 06/02/2008 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 10/677,305 | YOON ET AL. |
| | **Examiner** | **Art Unit** |
| | AZIM RAHIM | 3744 |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☒ Responsive to communication(s) filed on *28 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) *16-22,27,28 and 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-22,27,28 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 16, 19-20, 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Brown, Jr. et al. (US 5,761,083) in view of Li et al. (US 2002/0076939), Naotaka (JP 2002-183258) and Soh (US 2002/0115435).

Brown, Jr. et al. explicitly teach the method and apparatus of a central control system for controlling air conditioners (10), comprising a plurality of air conditioners (col. 3, lines 38-53), a central controller (18) that receives a control command to control the air conditioners (col. 3, lines 38-44), that monitors the operating states of the controlled air conditioners (col. 4, lines 38-42), that automatically schedules control signals so that time intervals between operation of the air conditioners can be adjusted to manage electric power consumption and that outputs the scheduled control signals to the air conditioners (col. 4, lines 25-53), an internet protocol sharer connected to the central controller that performs an integrated management operation for the internet protocol addresses assigned to the air conditioners (col. 4, lines 25-34), a control command and control program, a module transmitting control command "to the air conditioners, managing a time schedule to adjust the air conditioners and globally controlling the modules (Figure 2), and the control program being executed so that a timetable in which the operation schedule for the air conditioners corresponding to a specified period can be displayed on the monitor (col. 5, lines 14-20). It is noted that since information is transmitted and displayed, there exists a display means for displaying the information.

Brown, Jr. et al. fail to explicitly teach a touch screen-based monitor configured to input the control command through a screen touch operation, the control program being executed so that a timetable in which the operation schedule for the air conditioners corresponding to a specified period can be displayed on the monitor, the timetable can be input and edited from the monitor, the timetable having a number of cells, the control program converting colors of selected cells so that the cells selected to input the operation schedule for the air conditioners can be distinguished from non-selected cells, the selected cells distinguished by the colors can be displayed, and the control program being further configured to receive the operation schedule of the designated air conditioners by dragging and selecting the cells on the monitor.

Li et al. explicitly teach the concept of providing a touch screen-based monitor (paragraph 0033) configured to input the control command through a screen touch operation (paragraph 0033), and the control program converting colors of selected cells so that the cells selected to input the operation schedule for the air conditioners can be distinguished from non-selected cells, and the selected cells distinguished by the colors can be displayed (paragraph 0033).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the air conditioning control system of Brown, Jr. et al. with the control characteristics of Li et al. because these features provide an advantageously user- friendly interface, thus increasing efficiency of use by a user. Also note that most personal computers utilized color changing of cells and or windows on spreadsheets.

Naotaka teaches the timetable can be input and edited from the monitor (see solution, user input, via a computer)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the central control system of Brown, Jr. et al. to include the timetable as taught by Naotaka in order for a user to easily edit cells in a timetable for viewing by other users.

Soh explicitly teaches a. touch screen based control system featuring the ability to drag cells on a monitor (paragraph 0032).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the air conditioning control system of Brown, Jr. et al. and Li et al. with the control features of Soh since drag and drop features advantageously provide a user-friendly interface, thus increasing efficiency of use by a user.

8. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Brown, Jr. et al. (US 5,761,083) as modified by Li et al. (US 2002/0076939), Naotaka (JP 2002-183258) and Soh (US 2002/0115435) as applied to claim 16 above, and in further view of Kikuchi et al. (US 2003/0070438).

Brown, Jr. et al., Li et al., Naotaka et al. and Soh explicitly teach the elements of the present invention as described above, but fail to teach the air conditioners connected on an internal network and assigned to different IP addresses.

Kikuchi et al. explicitly teach air conditioners connected on an internal network (paragraph 0008, lines 5-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the air conditioner control system as taught by Brown, Jr. et al., Li et al., Naotaka et al. and Soh with the internal network as taught by Kikuchi et al. since utilizing an internal network increases advantageously increases efficiency and speed of controlling a system.

Regarding the use of separate IP addresses, one of ordinary skill in the computer art would have known to use separate IP addresses to efficiently isolate and distinguish one air conditioner from another.

9. Claims 21-22, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, Jr. et al. (US 5,761,083) in view of Li et al. (US 2002/0076939) in further view of Kline et al. (US 6,241,156).

Brown, Jr. et al. and Li et al. explicitly teach the elements of the present invention as described above, but fail to teach a client manager providing a web page to remotely control the air conditioners, and a database storing data.

Kline et al. explicitly teach a client manager providing a web page to remotely control air conditioners (col. 3, lines 1-20) and a database storing data (col. 9, lines 1-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the air conditioner control System as taught by Brown, Jr. et al. and Li et al. with the web page control as taught by Kline et al. since the internet provides a user friendly, aesthetically pleasing means of remote control.

## ***Response to Arguments***

3. Applicant's arguments filed 1/28/2008 have been fully considered but they are not persuasive.

The Applicants allege the following: "The monitor as taught by LI teaches away from the touch screen-based monitor recited in claims 16 and 27. Furthermore, the combination of BROWN and LI is improper insofar as BROWN is directed to an energy management and home automation system and LI is directed to a wafer- manufacturing process. There is no proper reason as to why one of ordinary skill in the art would combine the monitor used in the wafer-manufacturing process of LI with the energy management and home automation system of BROWN. Clearly, the high density plasma chemical vapor deposition processing of gallium arsenide wafers to which LI is directed is not within the field of the inventors' endeavor. That is, LI is not directed to a system and method for controlling air conditioners. Further, neither the wafer-manufacturing process to which LI is directed nor the use of the monitor during the wafer-manufacturing process are reasonably pertinent to the particular problem with which the inventors were involved. That is, neither is pertinent to scheduling control signals corresponding to a control command so that time intervals between operation of the air conditions can be adjusted to manage electric power consumption, as recited in claim 16. Moreover, the monitor used in the wafer-manufacturing process of LI is not reasonably pertinent with respect to the energy management and home automation system of BROWN. Accordingly, the combination of BROWN and LI is improper, at least insofar as each of the references are from non-analogous arts, both with respect to the present application as well as with respect to each other." The Examiner respectfully disagrees. The deficiency of Brown in regard to claim 1 is only the touch screen monitor, not the central control system for controlling air conditioners as a whole. Brown does teach that information is transmitted and displayed in column 5, lines 41-45, implicitly teaching that there exists a display means. There are many devices that are interfaced by a touch screen monitor such as automobiles, laptop computers, grocery store checkout lines and the like. One having ordinary skill in the art would know that touch screen monitors have many uses. Although Li doesn't disclose a system for controlling air conditioners, the limitation that Li overcomes is the touch screen monitor. Regardless of the function of the touch screen monitor of Li, the touch screen monitor of Li can be used with the control system of Brown. Since the field of the inventors' endeavor includes the touch screen monitor, any touch screen monitor is within the inventors' field of endeavor. The analogous art here involves the touch screen monitor. Hence, touch screen monitor of Li can be used with the control system of Brown in order to provide a user friendly interface, thus increasing efficiency of use. Therefore, the combination of Brown and Li is proper and the rejection of claim 16 is properly upheld.

The Applicants allege the following: "For example, the cited references do not teach that the air conditioners are connected to an internal network, as recited in claim 17. Furthermore, the cited references do not teach an internet protocol sharer, as recited in claim 18. Moreover, the cited references do not teach that that information of the operating states can be output in response to the control command, as recited in claim 19." The Examiner respectfully disagrees. The air conditioning equipment is controlled by a service provider company via internet in paragraph 8 of Kikuchi et al. Also, one having ordinary sill in the art would know that in order for the service provider company to control the air conditioning equipment, an IP address must be assigned to the air conditioning equipment and the service provider company as suggested by Kikuchi et al. In addition, Brown explicitly teaches that a controller that receives control commands and monitors the operating states of the controlled air conditioners in col. 3, lines 38-42. Since the limitation reads "that information can be output in response to the control command," (emphasis added) the controller of Brown is capable of controlling the information of the operating states to be outputted in response to the control command. Therefore, the rejections are properly upheld.

The applicants' assertion that claims 17-22, 28 and 30 are allowable at least because they depend, directly or indirectly, form claims 16 and 27 is not persuasive since the independent claim(s) have been properly rejected..

## *Conclusion*

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIM RAHIM whose telephone number is (571) 270-1998. The examiner can normally be reached on Monday - Thursday 7am - 3pm EST and Friday 7am - 9:30am EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR 5/16/2008 /Cheryl J. Tyler/
Supervisory Patent Examiner, Art Unit 3744